

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/591,199  
Source: IFWP  
Date Processed by STIC: 09/12/2006

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 09/12/2006

PATENT APPLICATION: US/10/591,199

TIME: 11:31:23

Input Set : A:\060825.Sequence Listing.txt

Output Set: N:\CRF4\09122006\J591199.raw

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3 <110> APPLICANT: CREIGHTON UNIVERSITY
5 <120> TITLE OF INVENTION: ESTROGEN RECEPTORS AND METHODS OF USE
7 <130> FILE REFERENCE: 180.0012 0201
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/591,199
C--> 10 <141> CURRENT FILING DATE: 2006-08-30
12 <150> PRIOR APPLICATION NUMBER: 60/552,067
13 <151> PRIOR FILING DATE: 2004-03-10
15 <150> PRIOR APPLICATION NUMBER: 60/643,469
16 <151> PRIOR FILING DATE: 2005-01-13
18 <160> NUMBER OF SEQ ID NOS: 27
20 <170> SOFTWARE: PatentIn version 3.2
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 27
24 <212> TYPE: PRT
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: C-terminus of SEQ ID NO:20
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33 1           5           10           15
36 Lys Ile Phe Gly Asn Lys Trp Phe Pro Arg Val
37           20           25
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41 <211> LENGTH: 6
42 <212> TYPE: PRT
43 <213> ORGANISM: Artificial Sequence
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46 <223> OTHER INFORMATION: carrier protein.
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51 1           5
54 <210> SEQ ID NO: 3
55 <211> LENGTH: 10
56 <212> TYPE: PRT
57 <213> ORGANISM: Artificial Sequence
59 <220> FEATURE:
60 <223> OTHER INFORMATION: carrier protein
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64 Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
65 1           5           10
68 <210> SEQ ID NO: 4
69 <211> LENGTH: 7
70 <212> TYPE: PRT

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71 <213> ORGANISM: Artificial Sequence
73 <220> FEATURE:
74 <223> OTHER INFORMATION: carrier protein
76 <400> SEQUENCE: 4
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79 1 5
82 <210> SEQ ID NO: 5
83 <211> LENGTH: 9
84 <212> TYPE: PRT
85 <213> ORGANISM: Artificial Sequence
87 <220> FEATURE:
88 <223> OTHER INFORMATION: carrier protein
90 <400> SEQUENCE: 5
92 Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
93 1 5
96 <210> SEQ ID NO: 6
97 <211> LENGTH: 8
98 <212> TYPE: PRT
99 <213> ORGANISM: Artificial Sequence
101 <220> FEATURE:
102 <223> OTHER INFORMATION: carrier protein
104 <400> SEQUENCE: 6
106 Asp Tyr Lys Asp Asp Asp Asp Lys
107 1 5
110 <210> SEQ ID NO: 7
111 <211> LENGTH: 11
112 <212> TYPE: PRT
113 <213> ORGANISM: Artificial Sequence
115 <220> FEATURE:
116 <223> OTHER INFORMATION: carrier protein
118 <400> SEQUENCE: 7
120 Tyr Thr Asp Ile Glu Met Asn Arg Leu Gly Lys
121 1 5 10
124 <210> SEQ ID NO: 8
125 <211> LENGTH: 11
126 <212> TYPE: PRT
127 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <223> OTHER INFORMATION: carrier protein
132 <400> SEQUENCE: 8
134 Met Ala Ser Met Thr Gly Gly Gln Gln Met Gly
135 1 5 10
138 <210> SEQ ID NO: 9
139 <211> LENGTH: 6
140 <212> TYPE: PRT
141 <213> ORGANISM: Artificial Sequence
143 <220> FEATURE:
144 <223> OTHER INFORMATION: carrier protein
146 <400> SEQUENCE: 9

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148 Asp Thr Tyr Arg Tyr Ile
149 1      5
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153 <211> LENGTH: 6
154 <212> TYPE: PRT
155 <213> ORGANISM: Artificial Sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: carrier protein
160 <400> SEQUENCE: 10
162 Thr Asp Phe Tyr Leu Lys
163 1      5
166 <210> SEQ ID NO: 11
167 <211> LENGTH: 6
168 <212> TYPE: PRT
169 <213> ORGANISM: Artificial Sequence
171 <220> FEATURE:
172 <223> OTHER INFORMATION: carrier protein
174 <400> SEQUENCE: 11
176 His His His His His His
177 1      5
180 <210> SEQ ID NO: 12
182 <400> SEQUENCE: 12
W--> 183 000
185 <210> SEQ ID NO: 13
186 <211> LENGTH: 6
187 <212> TYPE: PRT
188 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: carrier protein
193 <400> SEQUENCE: 13
195 Gln Tyr Pro Ala Leu Thr
196 1      5
199 <210> SEQ ID NO: 14
200 <211> LENGTH: 11
201 <212> TYPE: PRT
202 <213> ORGANISM: Artificial Sequence
204 <220> FEATURE:
205 <223> OTHER INFORMATION: carrier protein
207 <400> SEQUENCE: 14
209 Gln Arg Gln Tyr Gly Asp Val Phe Lys Gly Asp
210 1      5      10
213 <210> SEQ ID NO: 15
214 <211> LENGTH: 6
215 <212> TYPE: PRT
216 <213> ORGANISM: Artificial Sequence
218 <220> FEATURE:
219 <223> OTHER INFORMATION: carrier protein
221 <400> SEQUENCE: 15
223 Glu Tyr Met Pro Met Glu

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229 <212> TYPE: PRT
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233 <223> OTHER INFORMATION: carrier protein
235 <400> SEQUENCE: 16
237 Glu Phe Met Pro Met Glu
238 1          5
241 <210> SEQ ID NO: 17
242 <211> LENGTH: 5
243 <212> TYPE: PRT
244 <213> ORGANISM: Artificial Sequence
246 <220> FEATURE:
247 <223> OTHER INFORMATION: carrier protein
249 <400> SEQUENCE: 17
251 Arg Tyr Ile Arg Ser
252 1          5
255 <210> SEQ ID NO: 18
256 <211> LENGTH: 595
257 <212> TYPE: PRT
258 <213> ORGANISM: Homo Sapiens
260 <400> SEQUENCE: 18
262 Met Thr Met Thr Leu His Thr Lys Ala Ser Gly Met Ala Leu Leu His
263 1          5          10          15
266 Gln Ile Gln Gly Asn Glu Leu Glu Pro Leu Asn Arg Pro Gln Leu Lys
267          20          25          30
270 Ile Pro Leu Glu Arg Pro Leu Gly Glu Val Tyr Leu Asp Ser Ser Lys
271          35          40          45
274 Pro Ala Val Tyr Asn Tyr Pro Glu Gly Ala Ala Tyr Glu Phe Asn Ala
275          50          55          60
278 Ala Ala Ala Ala Asn Ala Gln Val Tyr Gly Gln Thr Gly Leu Pro Tyr
279 65          70          75          80
282 Gly Pro Gly Ser Glu Ala Ala Ala Phe Gly Ser Asn Gly Leu Gly Gly
283          85          90          95
286 Phe Pro Pro Leu Asn Ser Val Ser Pro Ser Pro Leu Met Leu Leu His
287          100          105          110
290 Pro Pro Pro Gln Leu Ser Pro Phe Leu Gln Pro His Gly Gln Gln Val
291          115          120          125
294 Pro Tyr Tyr Leu Glu Asn Glu Pro Ser Gly Tyr Thr Val Arg Glu Ala
295          130          135          140
298 Gly Pro Pro Ala Phe Tyr Arg Pro Asn Ser Asp Asn Arg Arg Gln Gly
299 145          150          155          160
302 Gly Arg Glu Arg Leu Ala Ser Thr Asn Asp Lys Gly Ser Met Ala Met
303          165          170          175
306 Glu Ser Ala Lys Glu Thr Arg Tyr Cys Ala Val Cys Asn Asp Tyr Ala
307          180          185          190
310 Ser Gly Tyr His Tyr Gly Val Trp Ser Cys Glu Gly Cys Lys Ala Phe

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311          195          200          205
314 Phe Lys Arg Ser Ile Gln Gly His Asn Asp Tyr Met Cys Pro Ala Thr
315          210          215          220
318 Asn Gln Cys Thr Ile Asp Lys Asn Arg Arg Lys Ser Cys Gln Ala Cys
319 225          230          235          240
322 Arg Leu Arg Lys Cys Tyr Glu Val Gly Met Met Lys Gly Gly Ile Arg
323          245          250          255
326 Lys Asp Arg Arg Gly Gly Arg Met Leu Lys His Lys Arg Gln Arg Asp
327          260          265          270
330 Asp Gly Glu Gly Arg Gly Glu Val Gly Ser Ala Gly Asp Met Arg Ala
331          275          280          285
334 Ala Asn Leu Trp Pro Ser Pro Leu Met Ile Lys Arg Ser Lys Lys Asn
335          290          295          300
338 Ser Leu Ala Leu Ser Leu Thr Ala Asp Gln Met Val Ser Ala Leu Leu
339 305          310          315          320
342 Asp Ala Glu Pro Pro Ile Leu Tyr Ser Glu Tyr Asp Pro Thr Arg Pro
343          325          330          335
346 Phe Ser Glu Ala Ser Met Met Gly Leu Leu Thr Asn Leu Ala Asp Arg
347          340          345          350
350 Glu Leu Val His Met Ile Asn Trp Ala Lys Arg Val Pro Gly Phe Val
351          355          360          365
354 Asp Leu Thr Leu His Asp Gln Val His Leu Leu Glu Cys Ala Trp Leu
355          370          375          380
358 Glu Ile Leu Met Ile Gly Leu Val Trp Arg Ser Met Glu His Pro Val
359 385          390          395          400
362 Lys Leu Leu Phe Ala Pro Asn Leu Leu Leu Asp Arg Asn Gln Gly Lys
363          405          410          415
366 Cys Val Glu Gly Met Val Glu Ile Phe Asp Met Leu Leu Ala Thr Ser
367          420          425          430
370 Ser Arg Phe Arg Met Met Asn Leu Gln Gly Glu Glu Phe Val Cys Leu
371          435          440          445
374 Lys Ser Ile Ile Leu Leu Asn Ser Gly Val Tyr Thr Phe Leu Ser Ser
375          450          455          460
378 Thr Leu Lys Ser Leu Glu Glu Lys Asp His Ile His Arg Val Leu Asp
379 465          470          475          480
382 Lys Ile Thr Asp Thr Leu Ile His Leu Met Ala Lys Ala Gly Leu Thr
383          485          490          495
386 Leu Gln Gln Gln His Gln Arg Leu Ala Gln Leu Leu Leu Ile Leu Ser
387          500          505          510
390 His Ile Arg His Met Ser Asn Lys Gly Met Glu His Leu Tyr Ser Met
391          515          520          525
394 Lys Cys Lys Asn Val Val Pro Leu Tyr Asp Leu Leu Leu Glu Met Leu
395          530          535          540
398 Asp Ala His Arg Leu His Ala Pro Thr Ser Arg Gly Gly Ala Ser Val
399 545          550          555          560
402 Glu Glu Thr Asp Gln Ser His Leu Ala Thr Ala Gly Ser Thr Ser Ser
403          565          570          575
406 His Ser Leu Gln Lys Tyr Tyr Ile Thr Gly Glu Ala Glu Gly Phe Pro
407          580          585          590

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VERIFICATION SUMMARY

DATE: 09/12/2006

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Input Set : A:\060825.Sequence Listing.txt

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L:9 M:270 C: Current Application Number differs, Replaced Current Application Number

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:183 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (12) SEQUENCE: